

Lake Erie's 2015 Algal bloom effects revealed



[Jessica Denton](#), Reporter 9:06 p.m. EDT October 8, 2015



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Captain Dave Spangler, charter boat business owner and the Lake Erie Charter Boat Association's 2014 Captain of the Year, speaks at a press event on Lake Erie algal blooms at Lake Erie Shores and Islands center in Portage Township on Thursday. (Photo: Jessica Denton/News Herald)Buy Photo

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PORTAGE TOWNSHIP — It's a toxic problem that has made headlines around the state, the country and even the world in the last decade — sickeningly blue-green algae blooming in Lake Erie's waters each year like clockwork.

It's affected almost every facet of life for those who make their living on the Great Lakes smallest and shallowest lakes - from restaurants and hotels to charter fishing and tourism to the price of water coming out of your tap — and 2015 was no exception.

On Thursday, charter captains, travel personnel, water treatment engineers and business owners gathered at the Lake Erie Shores and Islands center in Portage Township to speak to the press about this year's algal bloom and its devastating effects on their industries.

Effects on land and water

Ohio's Lake Erie bordering counties make up a \$12.9 billion economic impact is threatened by the blooms, Larry Fletcher, Executive Director of Lake Erie Shores and Islands, said.

North America's largest charter fishing group — the Lake Erie Charter Boat Association — saw the effects of the algae, not only floating in pea-sized particles in the lake, but in the form of cancelled charters and having to turn others away because the fish moved to cleaner water.

"Our 2015 fishing season started out with great promise but went downhill in early summer," said captain Dave Spangler, who owns Dr. Bug's Charters. "Business was dramatically affected and the lake conditions were the worst I've ever seen."

Spangler was just one of many charter captains who had a difficult season. He said in one day a fellow captain lost four charters and six nights of lodging — a total of \$3,460 gone in just a few hours.

Some charters have resolved to go out farther into the lake, close to the Canadian border where there isn't as much algae. But the time and cost for fuel adds up. Bait and tackle shops weren't selling bait, because the fisherman weren't coming up. Fish cleaners had no fish to clean, because no fish were being caught.

Another popular area chartering business, which Spangler didn't name, was \$32,000 under from August 2014. That's money that can't be made up in September or October, he said.

"We operate on a six month season. That's all we've got," Spangler said. "When you lose a month or two, there's no recovering."

"I've seen a 25 percent drop in revenue this season," said captain Paul Pachowski, President of the Lake Erie Charter Boat Association. "People cancelled their fishing trips after hearing about the lake's toxic algae."

"This is our biggest threat," Lake Erie Improvement Association president and owner of the Catawba Island Club Jim Stouffer said to the group. "We're at a 'Y' or a fork in the road now. We need to do more and to work together as a unit."

"There has been substantial progress, the business community recognizes that much more still needs to be done."

Identifying the source

Microcystins (or cyanoginosins) are a class of toxins produced by certain freshwater cyanobacteria. More than 50 different microcystins have been discovered so far, of which microcystin-LR is the most common.

During an algal bloom, like the ones that have plagued Lake Erie for the past decade, microcystins are produced in large quantities and threaten drinking and irrigation water supplies.

The dissolved reactive phosphorus comes from fertilizer used on farms in northwest Ohio and northeast Indiana. If not properly placed or injected into farmland, the fertilizer is washed away with the rain water and flows into the rivers and then into the Lake.

2015's unusually dry May and heavy rains throughout June led to a large amount of dissolved reactive phosphorus being released into the lake through its rivers.

When the lake's temperature heats up, as it does in mid-summer, the cyanobacteria grow and produce toxic microcystin-LR, which is harmful if consumed by people or animals.

Even fish, who thrive on "good algae" called diatoms, can't stomach the cyanobacteria and move to cleaner waters to feed. Fish caught in the lake are safe to eat if properly cleaned, the captains said.

In August 2014, the city of Toledo detected unhealthy levels of microcystin-LR in its drinking water, which is taken from the lake. More than 400,000 people were without clean drinking water, which made international headlines and put the algal bloom on the radar for more people.

The cost of clean water

On July 9, the [National Oceanic and Atmospheric Administration](#) (NOAA) announced its prediction that the Lake Erie's 2015 season's algal bloom could be the second worst on record, right behind 2011. Satellite images showed algae spreading steadily across the lake in the western basin and by early September, had reached past Cleveland in the eastern basin.

As much of the area's drinking water comes from Lake Erie water intakes, monitoring and testing the water has become a multiple-times-a-day operation for water treatment plants.

The cost to test and treat the water for microcystin-LR and other bacteria like e.coli is mounting quickly, according to Kelly Frey, Sanitary Engineer for the Ottawa County Regional Water Treatment Plant.

"We're throwing money at the wrong end of the problem," Frey said. "We have to stop the nutrients from getting into the lake."

Millions of dollars are being spent to upgrade facilities in Toledo and Oregon, Frey said. Ottawa Counties is holding steady and didn't have any major problems with microcystin-LR, but the cost to treat and test and the eventual upgrades and maintenance is being passed on to the consumer.

On average, it's costing the Ottawa County plant about \$10-15 per person to treat the water for the season. It's not a lot, Frey said, but it adds up.

"We're doing what we can to manage it but the real victims here are the constituents. They pay the price for it."

Work isn't done

Many of the speakers on Thursday echoed the thought that just because the tourism season is over, doesn't mean the issue should fall by the wayside.

"Don't become apathetic," Spangler urged. "We have to get this under control."

Keeping those who put the phosphorus in the lake accountable to begin with is a big step, he said. Legislation the Columbus attempts to tackle the issue of farmers becoming more educated on what they're putting in to the ground and how to keep it from leaching into the water system.

"Senate Bill 1 and Senate Bill 150 are a great start, we have to enforce them," Spangler said. "I urge you to talk to your elected officials. Keep the politics out of it."

"The lake doesn't know blue from red, it just knows green."

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